

August 25, 2020

Federal Express

Air Enforcement Branch (3AP20)  
United States Environmental Protection Agency  
Region 3  
1650 Arch Street  
Philadelphia, PA 19103-2029

Re Semiannual NSPS (Subpart VV, Subpart DDD)

Braskem America, Inc.

Report Period: 2/1/2020 – 7/31/2020

- 1) Leak Detection and Repair (LDAR) Report
- 2) Periods when "Vent Stream Diverted from Control Device"
- 3) Periods when flare or pilot light was absent
- 4) Per 40 CFR §60.565(k); Notification of process operational changes that increased the uncontrolled annual emissions or the VOC weight percent of the individual stream

Dear Sir or Madam:

Braskem America, Inc. located in Marcus Hook, PA hereby submits the above-mentioned NSPS semiannual reports for the above-referenced report period. The reports and supporting documentation are numbered below:

- 1) LDAR (*see attached*):
  - ✓ Process unit identification
  - ✓ Monthly leak information
  - ✓ Justification for delayed repairs
  - ✓ Dates of process unit shutdowns
  - ✓ Revisions to items submitted in the initial report
- 2) Periods when "Vent Stream Diverted from Control Device" (*none to report*).  

750 West 10<sup>th</sup> Street  
Marcus Hook, PA 19061
- 3) Periods when the flare or pilot light was absent (*none to report*)
- 4) Notification of process operational changes that increased the uncontrolled annual emissions or the VOC weight percent of the individual stream (*none to report*).

Braskem has also confirmed with Energy Transfer Partners – Marcus Hook Industrial Complex that their flare which accepts Braskem materials had no periods of vent stream diversion from the control device and no periods when the flare or pilot light was absent during the reporting period.

If you have any questions, please contact our Environmental Engineer, Jeffrey Hirt at (610) 497-8229 or by e-mail at [joffrey.hirt@braskom.com](mailto:joffrey.hirt@braskom.com).

Sincerely,

Braskem America, Inc.  
Marcus Hook



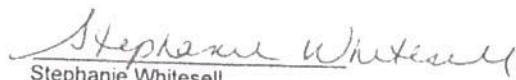
Stephanie Whitesell  
Facility Manager

Attachments

cc: Mr. James Rebarchak, Program Manager  
PADEP Bureau of Air Quality  
Southeast Regional Office  
2 East Main Street  
Norristown, PA 19401-4915

**Certification of Truth, Accuracy and Completeness**

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in these reports is true, accurate, and complete.



Stephanie Whitesell  
Braskem America, Inc.  
Marcus Hook

*Facility Manager*

Lower #1  
Monitoring Period: 2/1/20 to 7/31/20

<b>VALVES</b>	<b>February 2020</b>	<b>March 2020</b>	<b>April 2020</b>	<b>May 2020</b>	<b>June 2020</b>	<b>July 2020</b>
Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PUMPS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair	0	0	0	0	0	0

**COMPRESSORS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PROCESS UNIT SHUTDOWNS**

Dates of Process Unit Shutdowns	None	None	None	None	None	None
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Notes:

\* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown; or, they were isolated from VOC service.

C-3 Rack (H-5)  
Monitoring Period: 2/1/20 to 7/31/20

<b>VALVES</b>	<i>February 2020</i>	<i>March 2020</i>	<i>April 2020</i>	<i>May 2020</i>	<i>June 2020</i>	<i>July 2020</i>
Leaks Detected	0	1	0	0	2	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PUMPS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair**	0	0	0	0	0	0

**COMPRESSORS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PROCESS UNIT SHUTDOWNS**

Dates of Process Unit Shutdowns	None	None	None	None	None	None
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Notes:

\* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown; or, they were isolated from VOC service.

\*\* Pumps placed on delay of repair are isolated from VOC service while awaiting repair unless the backup pump is also on DOR; in which case one of the pumps must operate while the other is awaiting repair.

15-2 Poly  
Monitoring Period: 2/1/20 to 7/31/20

<b>VALVES</b>	<b>February 2020</b>	<b>March 2020</b>	<b>April 2020</b>	<b>May 2020</b>	<b>June 2020</b>	<b>July 2020</b>
Leaks Detected	0	0	5	0	0	1
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PUMPS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair**	0	0	0	0	0	0

**COMPRESSORS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PROCESS UNIT SHUTDOWNS**

Dates of Process Unit Shutdowns	None	None	None	None	None	None
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**Notes:**

\* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown; or, they were isolated from VOC service.

\*\* Pumps placed on delay of repair are isolated from VOC service while awaiting repair unless the backup pump is also on DOR; in which case one of the pumps must operate while the other is awaiting repair.

Cavern #4  
Monitoring Period: 2/1/20 to 7/31/20

<b>VALVES</b>	<b>February 2020</b>	<b>March 2020</b>	<b>April 2020</b>	<b>May 2020</b>	<b>June 2020</b>	<b>July 2020</b>
Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

<b>PUMPS</b>	<b>February 2020</b>	<b>March 2020</b>	<b>April 2020</b>	<b>May 2020</b>	<b>June 2020</b>	<b>July 2020</b>
Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair**	0	0	0	0	0	0

<b>COMPRESSORS</b>	<b>February 2020</b>	<b>March 2020</b>	<b>April 2020</b>	<b>May 2020</b>	<b>June 2020</b>	<b>July 2020</b>
Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

<b>PROCESS UNIT SHUTDOWNS</b>						
Dates of Process Unit Shutdowns	None	None	None	None	None	None

Notes:

\* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown; or, they were isolated from VOC service.

\*\* Pumps placed on delay of repair are isolated from VOC service while awaiting repair unless the backup pump is also on DOR; in which case one of the pumps must operate while the other is awaiting repair.



Plant 2  
Monitoring Period: 2/1/20 to 7/31/20

<b>VALVES</b>	<b>February 2020</b>	<b>March 2020</b>	<b>April 2020</b>	<b>May 2020</b>	<b>June 2020</b>	<b>July 2020</b>
Leaks Detected	3	0	2	4	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	1	0	0	3	0	0

**PUMPS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**COMPRESSORS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PROCESS UNIT SHUTDOWNS**

Dates of Process Unit Shutdowns	None	None	None	None	6/1 - 6/7 Partial Unit Shutdown	7/9 - 7/10 Partial Unit Shutdown
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Notes:

- \* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown, or, they were isolated from VOC service.



Plant 1  
Monitoring Period: 2/1/20 to 7/31/20

<b>VALVES</b>	<b>February 2020</b>	<b>March 2020</b>	<b>April 2020</b>	<b>May 2020</b>	<b>June 2020</b>	<b>July 2020</b>
Leaks Detected	8	1	9	1	2	3
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	2	0	0	0	0	1

**PUMPS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**COMPRESSORS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PROCESS UNIT SHUTDOWNS**

Dates of Process Unit Shutdowns	None	3/10 - 3/14 Partial Unit Shutdown	4-29 - 5/11 Partial Unit Shutdown	4-29 - 5/11 5/23 - 5/31 Partial Unit Shutdown	6/22 - 7/1	6/22 - 7/1
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**Notes:**

- \* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown; or, they were isolated from VOC service.

# Revisions to Initial Report As of 7/31/2020

	<i>Plant 1</i>	<i>Plant 2</i>	<i>Cavern</i>	<i>Poly</i>	<i>C-3</i>	<i>Lower #1</i>
<b>VALVES*</b>	1775	1522	628	2256	1188	47
<b>PUMPS**</b>	3	2	7	16	4	0
<b>COMPRESSORS**</b>	0	0	0	0	0	0

Red Font indicates a change from previous report period.

## Notes:

\* Total does not include components designated as no detectible emissions (NDE).

\*\* Total does not include components designated as no detectible emissions (NDE) or those equipped with a closed vent loop system.

Totals do not include permanently inactive components.



FEB 27 2020

February 25, 2020

Federal Express 8113 0908 3836

Air Enforcement Branch (3AP20)  
United States Environmental Protection Agency  
Region 3  
1650 Arch Street  
Philadelphia, PA 19103-2029

213

Re: Semiannual NSPS (Subpart VV, Subpart DDD) 207  
**Braskem America, Inc.**

**Report Period: 8/1/2019 – 1/31/2020**

- 1) Leak Detection and Repair (LDAR) Report
- 2) Periods when "Vent Stream Diverted from Control Device"
- 3) Periods when flare or pilot light was absent
- 4) Per 40 CFR §60.565(k); Notification of process operational changes that increased the uncontrolled annual emissions or the VOC weight percent of the individual stream.

Dear Sir or Madam:

Braskem America, Inc. located in Marcus Hook, PA hereby submits the above-mentioned NSPS semiannual reports for the above-referenced report period. The reports and supporting documentation are numbered below:

- 1) LDAR (*see attached*):
  - ✓ Process unit identification
  - ✓ Monthly leak information
  - ✓ Justification for delayed repairs
  - ✓ Dates of process unit shutdowns
  - ✓ Revisions to items submitted in the initial report
- 2) Periods when "Vent Stream Diverted from Control Device" (none to report).
- 3) Periods when the flare or pilot light was absent (none to report).
- 4) Notification of process operational changes that increased the uncontrolled annual emissions or the VOC weight percent of the individual stream (none to report).



Braskem has also confirmed with Energy Transfer Partners – Marcus Hook Industrial Complex that their flare which accepts Braskem materials had no periods of vent stream diversion from the control device and no periods when the flare or pilot light was absent during the reporting period.

If you have any questions, please contact our Environmental Engineer, Jeffrey Hirt at (610) 497-8229 or by e-mail at [jeffrey.hirt@braskem.com](mailto:jeffrey.hirt@braskem.com).

Sincerely,

Braskem America, Inc.  
Marcus Hook

A handwritten signature in blue ink, reading "Stephanie Whitesell".

Stephanie Whitesell  
Facility Manager

#### Attachments

**cc:** Mr. James Rebarchak, Program Manager  
PADEP Bureau of Air Quality  
Southeast Regional Office  
2 East Main Street  
Norristown, PA 19401-4915  
Federal Express 8113 0908 3825



### **Certification of Truth, Accuracy and Completeness**

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in these reports is true, accurate, and complete.

A handwritten signature in blue ink, reading "Stephanie Whitesell". The signature is fluid and cursive, with a horizontal line drawn underneath it.

Stephanie Whitesell  
Braskem America, Inc.  
Marcus Hook  
*Facility Manager*

Revisions to Initial Report  
As of 1/31/2020

	<i>Plant 1</i>	<i>Plant 2</i>	<i>Cavern</i>	<i>Poly</i>	<i>C-3</i>	<i>Lower #1</i>
<b>VALVES*</b>	<b>1775</b>	<b>1497</b>	<b>628</b>	<b>2256</b>	<b>1125</b>	<b>47</b>
<b>PUMPS**</b>	<b>3</b>	<b>2</b>	<b>7</b>	<b>16</b>	<b>4</b>	<b>0</b>
<b>COMPRESSORS**</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Red Font indicates a change from previous report period.

Notes:

\* Total does not include components designated as no detectible emissions (NDE).

\*\* Total does not include components designated as no detectible emissions (NDE) or those equipped with a closed vent loop system.

Totals do not include permanently inactive components.

Plant 1  
Monitoring Period: 8/1/19 to 1/31/20

<b>VALVES</b>	<b>August 2019</b>	<b>September 2019</b>	<b>October 2019</b>	<b>November 2019</b>	<b>December 2019</b>	<b>January 2020</b>
Leaks Detected	13	1	0	18	3	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	1	0	0	0	1	1

<b>PUMPS</b>	<b>August 2019</b>	<b>September 2019</b>	<b>October 2019</b>	<b>November 2019</b>	<b>December 2019</b>	<b>January 2020</b>
Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

<b>COMPRESSORS</b>	<b>August 2019</b>	<b>September 2019</b>	<b>October 2019</b>	<b>November 2019</b>	<b>December 2019</b>	<b>January 2020</b>
Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

<b>PROCESS UNIT SHUTDOWNS</b>	<b>August 2019</b>	<b>September 2019</b>	<b>October 2019</b>	<b>November 2019</b>	<b>December 2019</b>	<b>January 2020</b>
Dates of Process Unit Shutdowns	None	None	10/26 - 11/8	10/26 - 11/8 11/13 - 11/22	None	None

Notes:

- \* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown; or, they were isolated from VOC service.



Plant 2  
Monitoring Period: 8/1/19 to 1/31/20

<b>VALVES</b>	<b>August 2019</b>	<b>September 2019</b>	<b>October 2019</b>	<b>November 2019</b>	<b>December 2019</b>	<b>January 2020</b>
Leaks Detected	12	0	0	1	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	1	0	0	0	0	0

**PUMPS**

Leaks Detected	0	0	0	1	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**COMPRESSORS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PROCESS UNIT SHUTDOWNS**

Dates of Process Unit Shutdowns	None	None	10/27 - 11/3	10/27 - 11/3 11/13 - 11/14	None	None
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Notes:

\* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown; or, they were isolated from VOC service.

Cavern #4  
Monitoring Period: 8/1/19 to 1/31/20

<b>VALVES</b>	<i>August 2019</i>	<i>September 2019</i>	<i>October 2019</i>	<i>November 2019</i>	<i>December 2019</i>	<i>January 2020</i>
Leaks Detected	0	2	0	0	2	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

<b>PUMPS</b>	<i>August 2019</i>	<i>September 2019</i>	<i>October 2019</i>	<i>November 2019</i>	<i>December 2019</i>	<i>January 2020</i>
Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair**	0	0	0	0	0	0

<b>COMPRESSORS</b>	<i>August 2019</i>	<i>September 2019</i>	<i>October 2019</i>	<i>November 2019</i>	<i>December 2019</i>	<i>January 2020</i>
Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

<b>PROCESS UNIT SHUTDOWNS</b>	<i>August 2019</i>	<i>September 2019</i>	<i>October 2019</i>	<i>November 2019</i>	<i>December 2019</i>	<i>January 2020</i>
Dates of Process Unit Shutdowns	None	None	None	11/13-11/15	None	None

Notes:

\* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown; or, they were isolated from VOC service.

\*\* Pumps placed on delay of repair are isolated from VOC service while awaiting repair unless the backup pump is also on DOR; in which case one of the pumps must operate while the other is awaiting repair.

15-2 Poly  
Monitoring Period: 8/1/19 to 1/31/20

<b>VALVES</b>	<b>August 2019</b>	<b>September 2019</b>	<b>October 2019</b>	<b>November 2019</b>	<b>December 2019</b>	<b>January 2020</b>
Leaks Detected	2	1	8	0	0	5
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	1	0	0	0

**PUMPS**

Leaks Detected	0	0	1	0	2	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair**	0	0	0	0	2	0

**COMPRESSORS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PROCESS UNIT SHUTDOWNS**

Dates of Process Unit Shutdowns	None	None	10/24 - 10/26 Splitter #2 Only 10/30 - 10/31 Splitter #3 Only	11/13 - 11/15 Splitter #3 Only	None	None
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**Notes:**

\* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown; or, they were isolated from VOC service.

\*\* Pumps placed on delay of repair are isolated from VOC service while awaiting repair unless the backup pump is also on DOR, in which case one of the pumps must operate while the other is awaiting repair.

C-3 Rack (H-5)  
Monitoring Period: 8/1/19 to 1/31/20

<b>VALVES</b>	<i>August 2019</i>	<i>September 2019</i>	<i>October 2019</i>	<i>November 2019</i>	<i>December 2019</i>	<i>January 2020</i>
Leaks Detected	0	1	0	0	1	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

<b>PUMPS</b>						
Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair**	0	0	0	0	0	0

<b>COMPRESSORS</b>						
Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

<b>PROCESS UNIT SHUTDOWNS</b>						
Dates of Process Unit Shutdowns	None	None	None	None	None	None

Notes:

\* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown, or, they were isolated from VOC service.

\*\* Pumps placed on delay of repair are isolated from VOC service while awaiting repair unless the backup pump is also on DOR; in which case one of the pumps must operate while the other is awaiting repair.

Lower #1  
Monitoring Period: 8/1/19 to 1/31/20

<b>VALVES</b>	<b>August 2019</b>	<b>September 2019</b>	<b>October 2019</b>	<b>November 2019</b>	<b>December 2019</b>	<b>January 2020</b>
Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PUMPS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair	0	0	0	0	0	0

**COMPRESSORS**

Leaks Detected	0	0	0	0	0	0
Leaks Not Repaired Within 15 Days	0	0	0	0	0	0
Components Placed on Delay of Repair*	0	0	0	0	0	0

**PROCESS UNIT SHUTDOWNS**

Dates of Process Unit Shutdowns	None	None	None	None	None	None
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Notes:

- \* For components placed on delay of repair during this reporting period, replacement of the component was required. Either, it was not possible to isolate these components from the process, therefore, they cannot be replaced until the next process unit shutdown; or, they were isolated from VOC service.



42-045-00164

SEP 27 2019

September 26, 2019

Federal Express

James Rebarchak, *Regional Manager*  
PADEP Bureau of Air Quality  
Southeast Regional Office  
2 East Main Street  
Norristown, PA 19001

Re: **Title V Semi-Annual Deviation Report**  
Braskem America, Inc.  
TVOP 23-00012  
**Report Period: 1/1/2019 – 6/30/2019**

Dear Mr. Rebarchak:

Braskem America, Inc. hereby submits the required semiannual deviation report for the above-referenced report period. This attached report is required by our Title V Permit Section B Condition #025, Section C Condition #012, and pursuant to 25 Pa. Code §127.511(c).

If you have any questions, please contact Jeffrey Hirt, Environmental Engineer, at (610) 497-8229 or by e-mail at [Jeffrey.Hirt@Braskem.com](mailto:Jeffrey.Hirt@Braskem.com).

Sincerely,

BRASKEM AMERICA, INC.

A handwritten signature in blue ink, appearing to read "Stephanie Whitesell". The signature is fluid and cursive.

Stephanie Whitesell  
Facility Manager



**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**BUREAU OF AIR QUALITY**  
**COMPLIANCE CERTIFICATION FORM**  
 (25 Pa. Code § 127.513)

<b>Facility Name:</b>	Braskem America, Inc.	<b>Plant Name:</b>	Braskem – Marcus Hook
<b>Contact Person:</b>	Jeffrey Hirt	<b>Title:</b>	Environmental Engineer
<b>Operating Permit #:</b>	23-00012	<b>Phone Number:</b>	610-497-8229

For the period **1/1/2019 – 6/30/2019**, **Braskem America, Inc.** has been in continuous compliance with all applicable requirements of permit # **23-00012** (Issue date of *September 5, 2014*), determined by the method(s) of compliance specified in said permit, except for the following deviations, exceedances and excursions:

Sect/Cond #	Citation #	Source	Noncompliance	Monitoring Method(s)	Date	Duration	Corrective Action(s)
D/#003	(a)(2)	102A	There were two instances in this reporting period where the indications from all three flare pilot instruments were showing failure. On 1/24/19, this instance was less than one minute. On 2/19/19, there were intermittent instances over an eighteen minute period.	Redundant thermocouples are installed on the flare tip dedicated to the continuous monitoring of the flare for flame presence.	1/24/19, 2/19/19	1/24/19, 2/19/19	In both cases the facility closely monitored the situation to ensure that the flare instrumentation returned to a condition of flame presence.
D/#003	(a)(2)	102B	It should be noted that Braskem's conclusion, based on evaluation of all available information, is that the flare flame never completely extinguished. Flame outage results in certain operating conditions, notably including a loud sound accompanying a restart of the flare; these supporting indications of flare flame outage did not occur. Furthermore, there were several five second interval readings during the periods above where the thermocouples indicated the presence of a flame. Instead, during the relevant periods, it is more likely that variable flare steam flows (related to abnormal flare process gas	Redundant thermocouples are installed on the flare tip dedicated to the continuous monitoring of the flare for flame presence.	1/24/19, 2/19/19	1/24/19, 2/19/19	The facility also initiated an investigation related to these events to understand potential causes and implement necessary actions.



**Certification of Truth, Accuracy and Completeness**

Subject to the penalties of Title 18 Pa. C.S. Section 4904 and 35 P.S. Section 4009 (b) (2), I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this form are true, accurate, and complete.		
<b>Name:</b>	Stephanie Whitesell	<b>Title:</b>
<b>Signed:</b>	<i>Stephanie Whitesell</i>	<b>Date:</b>

Facility Manager

09/26/19

*This certification must be signed by a responsible official. Any certification submitted without a valid signature will be returned. The owner/operator shall identify any other material information needed in this certification to also comply with section 113(c)(2) of the Clean Air Act. If more spaces are needed, complete additional pages using the format shown in Addendum 1. This certification does not replace requirements pertaining to the submission of malfunction and CEM reports. DO NOT include that information on this form.*



March 29, 2021

James Rebarchak  
 Regional Air Quality Program Manager  
 Department of Environmental Protection  
 Southeast Regional Office  
 2 East Main Street  
 Norristown, PA 19401

Re: **Title V Annual Compliance Certification**  
 Braskem America, Inc. - Marcus Hook  
 TVOP 23-00012; **Report Period:** 1/1/2020 – 12/31/2020

Dear Mr. Rebarchak,

Braskem America, Inc. hereby submits the above-referenced report. This attached report is required by our Title V Permit, Section B, Condition #026.

As required by our Title V Permit, Section B, Condition #028, Braskem America, Inc. hereby states that this facility is in compliance with the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68, and 25 Pa Code §127.512(i).

Please note the following contacts at the facility for Title V:

	<u><b>Permit Contact Person</b></u>	<u><b>Responsible Official</b></u>
<u><b>Name:</b></u>	Jeffrey Hirt	Stephanie Whitesell
<u><b>Title:</b></u>	Environmental Engineer	Facility Manager
<u><b>Phone:</b></u>	(610) 497- 8229	(610) 497-8298

If you have any questions, please do not hesitate to contact our *Environmental Engineer*, Jeffrey Hirt, at the above number or by e-mail at [jeffrey.hirt@braskem.com](mailto:jeffrey.hirt@braskem.com).

Sincerely,  
 BRASKEM AMERICA, INC.

Stephanie Whitesell  
 Facility Manager

cc: Air Enforcement Branch (3AP12)  
 U. S. Environmental Protection Agency, Region III  
 1650 Arch Street  
 Philadelphia, PA 19103-2029

Enclosures



**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**BUREAU OF AIR QUALITY**  
**COMPLIANCE CERTIFICATION FORM**

(25 Pa. Code § 127.513)

<b>Plant Name:</b>	BRASKEM AMER INC/MARCUS HOOK	<b>Owner/Operator:</b>	BRASKEM AMER INC
<b>Tax ID/Plant:</b>	25-1534498-1	<b>DEP Facility ID:</b>	515469
<b>Contact Person:</b>	JEFFREY HIRT	<b>Title:</b>	LEAD ENV ENGR
<b>Operating Permit #:</b>	23-00012	<b>Phone Number:</b>	(610) 497-8229

For the period **01/01/2020 - 12/31/2020**, **BRASKEM AMER INC/MARCUS HOOK** has been in continuous compliance with all applicable requirements of permit # **23-00012**, determined by the method(s) of compliance specified in said permit, except for the following deviations, exceedances and excursions:

Sect./Cond. #	Citation #	Source	Noncompliance	Monitoring Method(s)	Date	Duration	Corrective Action(s)
D/#001	(a)	106	Although Braskem does not own or operate the flare associated with these sources, according to Energy Transfer Partners (ETP), on 5/7/2020 a shutdown of facility boilers occurred. This shutdown resulted in visible emissions at the	Recorded data through DCS and PI systems.	5/7/2020	5/7/2020	Pursuant to the discovery of the event, ETP performed the necessary adjustments to the process to return the flare to the desired conditions.
D/#012	(i)	106					
D/#001		107					
D/#002	(a)	107					
D/#014	(i)	107					

			West Warm Flare greater than five minutes in a two consecutive hour period.				
D/#001	(a)	106	Although Braskem does not own or operate the flare associated with these sources, according to Energy Transfer Partners (ETP), on 6/10/2020, the measured BTU's at the West Warm Flare dropped below 300 BTU/SCF for two hours. This event appears to be attributed to high nitrogen levels in the flare header.	Recorded data through DCS and Pi systems.	6/10/2020	6/10/2020	Pursuant to the discovery of the event, ETP performed the necessary adjustments to the process to return the flare to the desired conditions. To the extent that Braskem operations may have contributed to higher nitrogen levels in the flare, ETP and Braskem have engaged in discussions to better coordinate flaring events to ensure compliance with all flare requirements.
D/#012	(i)	106					
D/#001		107					
D/#002	(a)	107					
D/#014	(i)	107					
D/#004	(a)(1)	106	Upon reviewing LDAR records it was discovered that one pump located in the cavern process area (P-7A) did not appear to have a record of monthly Method 21 LDAR monitoring inspections	Routine inspections in LDAR database, operator rounds, and periodic record reviews.	1/1/2020 – 4/30/2020	1/1/2020 – 4/30/2020	Upon discovery of the equipment status, the associated pump was returned to active service, and therefore monthly pump inspections resumed. The facility implemented an additional practice to review the out of service status on a more frequent basis.



			between January and April. It should be noted that this pump was out of hydrocarbon service, therefore not subject to monthly monitoring, for several months in 2019. It should also be noted that throughout this period weekly visual pump inspections were completed and no leaks were identified through these routine measures.				
D/#005	(c)(1)(i)	106	Upon reviewing LDAR records it appears that the quarterly monitoring of 24 LDAR valve components associated with a pump in the Splitter process area (P-62B) did not occur in the first quarter of 2020. These valves were designated as out of service during	Routine inspections in LDAR database, operator rounds, and periodic record reviews.	2/24/2020 - 3/31/2020	2/24/2020 - 3/31/2020	Upon discovery of the valve status, the associated valves were returned to active service, and therefore routine quarterly monitoring inspections resumed. The facility implemented an additional practice to review the out of service status on a more frequent basis.

			<p>this period therefore not triggering the LDAR database to require the routine monitoring to be completed.</p> <p>These valves were initially taken out of service concurrently with the associated pump (P-62B) in late 2019. These components were inadvertently left in the out of service designation when the pump returned to service on 2/24/2020.</p>				
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D/#007	(c)(2)	103A	Upon reviewing LDAR records it appears that nine components in Plant 1 did not have the monthly follow up monitoring in May after first found to be leaking in April. It should be noted that Plant 1 monitoring in the second quarter typically occurs in May, however this monitoring occurred in April in an attempt to manage staffing limitations due to the COVID-19 pandemic.	Routine inspections in LDAR database, operator rounds, and periodic record reviews.	5/1/2020 – 5/31/2020	5/1/2020 – 5/31/2020	Upon discovery of missed follow up monitoring, the facility ensured that the necessary components were monitored in June. Subsequent to the second quarter the facility returned to the normal monitoring schedule for successive months.
D/#006	-	108	During the week of 12/21/2020 the weekly fire pump maintenance inspection does not appear to have been completed in accordance with manufacturer's recommendations.	Routine scheduled preventative maintenance work processes and recorded data through the DCS and Pi systems.	12/21/2020	12/21/2020	The required maintenance checks were performed the following weeks and did not indicate any issues with the operation of the fire pumps. Additional verification steps have been added to the maintenance work process to ensure work completion with sufficient documentation.
D/#008	-	108					
D/#012	(a)	108					



Certification of Truth, Accuracy and Completeness

Subject to the penalties of Title 18 Pa. C.S. Section 4904 and 35 P.S. Section 4009 (b) (2), I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this form are true, accurate, and complete.

Name:	Stephanie Whitesell	Title:	Facility Manager
Signed:	Stephanie Whitesell	Date:	03/29/21

**This certification must be signed by a responsible official. Any certification submitted without a valid signature will be returned.**

*The owner operator shall identify any other material information needed in this certification to also comply with section 113(c)(2) of the Clean Air Act. If more spaces are needed, complete additional pages using the format shown in Addendum 1. This certification does not replace requirements pertaining to the submission of malfunction and CEM reports. DO NOT include that information on this form.*

Citation	Permit Section	Terms & Conditions Contained in the Permit	Means of Determining Compliance Status	Compliance with Terms & Conditions was:
[25 Pa. Code §§ 127.412, 127.413, 127.414, 127.446(e), 127.503 & 127.704(b)] (Permit Renewal)	Section B	(a) An application for the renewal of the Title V permit shall be submitted to the Department at least six (6) months, and not more than 18 months, before the expiration date of this permit. The renewal application is timely if a complete application is submitted to the Department's Regional Air Man...	The renewal application was submitted to PADEP on 12/21/2018 and deemed administratively complete on 2/14/19. All applicable information and fees were submitted with the renewal application.	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
[25 Pa. Code § 127.513, 35 P.S. § 4008 and § 114 of the CAA] (Inspection and Entry)	Section B	(a) Upon presentation of credentials and other documents as may be required by law for inspection and entry purposes, the permittee shall allow the Department of Environmental Protection or authorized representatives of the Department to perform the following:  (1) Enter at reasonable times upon...	A guard is on duty at the plant entrance during normal business hours to allow PADEP and its authorized representatives to enter the facility. Based upon knowledge, information, and belief, the facility never denied entrance to PADEP or its authorized representatives in this reporting period.  (c) Statement of law that imposes no compliance obligations and is thus not amenable to certification.	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
[25 Pa. Code §§ 127.25, 127.444, & 127.512(c)(1)] (Compliance Requirements)	Section B	(a) The permittee shall comply with the conditions of this permit. Noncompliance with this permit constitutes a violation of the Clean Air Act and the Air Pollution Control Act and is grounds for one (1) or more of the following:  (1) Enforcement action  (2) Permit termination, revocation ...	First sentence of (a). With the possible exception of those terms and conditions identified below, emission units described in this permit were in compliance with all permit terms and conditions during the compliance review period, as determined by the	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent